

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Previously Presented) A method of applying a wear resistant coating material to a surface (22) of a piston ring (1), said method comprising the steps of:  
applying said coating material by a thermal spray process,  
heat treating said coating material at an elevated temperature and for a time effective to at least partially diffuse said coating material into the underlying surface, by exposing said material to heating temperature below the melting point of the coating material, and  
applying additional coating material layers (24) subject to successive heat treatments of each said applied coating material layer (24) in order to lay down on said piston ring surface (22) a plurality of layers (24) of same said coating material, wherein said resulting piston ring coating including the plurality of applied layers (24) has a porosity of between 1 to 15 vol%.
2. (Original) A method according to claim 1, wherein said piston ring (1) is moved relatively to a thermal spray device (3) and a heat treatment device (5) while applying said coating material (4) and heat treatment to said piston ring (1).
3. (Previously Presented) A method according to claim 1, wherein said piston ring (1) is rotated about its axis, in relation to a thermal spray device (3) and a

heat treatment device (5), while continuously applying said coating material (4) and heat treatment.

4. (Previously Presented) A method according to claim 1, wherein said heat treatment of said piston ring (1) is provided by induction.

5. (Previously Presented) A method according to claim 1, wherein said resulting piston ring coating has an evenly distributed porosity.

6. (Canceled).

7. (Previously Presented) A method according to claim 1, wherein said resulting piston ring coating comprises open pores (23).

8. (Previously Presented) A method according to claim 1, wherein each of said coating material layers (24) typically has a thickness of between 0.005 to 0.4 mm.

9. (Previously Presented) A method according to claim 1, wherein said coating material is of pulverulent type when fed to said thermal spray process.

10. (Previously Presented) A method according to claim 1, wherein said coating material has a wire-like form when fed to said thermal spray process.

11. (Previously Presented) A method according to claim 1, wherein said heat treatment results in necks (23) in contact points between particles (21) in at least said coating.

12. (Previously Presented) A method according to claim 1, wherein said coating material comprises a metallic compound selected from the group consisting of  $\text{Cr}_2\text{O}_3$  and  $\text{Al}_2\text{O}_3$ .

13. (Previously Presented) A method according to claim 1, wherein said coating material is a cermet.

14-25. (Cancelled)

26. (Previously Presented) A method according to claim 2, wherein said piston ring (1) is rotated about its axis, in relation to a thermal spray device (3) and a heat treatment device (5), while continuously applying said coating material (4) and heat treatment.

27. (Previously Presented) A method according to claim 2, wherein said heat treatment of said piston ring (1) is provided by induction.

28. (Previously Presented) A method according to claim 3, wherein said heat treatment of said piston ring (1) is provided by induction.

29-30. (Cancelled)